

REMARKS

The Applicants respectfully request further examination and consideration in view of the arguments set forth fully below. Prior to this Office Action, Claims 48-63 were pending in this application. Within the Office Action, Claims 48-63 are rejected. Claims 48 and 55 are amended. Thus, Claims 48-63 are currently pending in this application.

The amendments made to the claims do not constitute new matter. The amendments clarify the definition of the claimed limitation, “a predetermined content”, according to the instant specification.

Rejections Under 35 U.S.C. § 102

Within the Office Action, Claims 48-63 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,185,527 to Petkovic et al. (hereinafter “Petkovic”). The Applicants respectfully traverse these rejections.

Petkovic teaches a system and method for classifying and indexing audio streams to support subsequent applications such as information retrieval, gisting , summarizing, and skimming of the audio stream. Petkovic teaches receiving an audio stream, dividing the audio stream into successive intervals, and then dividing each interval into one or more segments (Petkovic, col. 7, lines 39-50). Each segment is classified as one of a predetermined set of audio events by determining audio features of each segment. The audio events include silence, speech, music, and speech on music (Petkovic, col. 7, lines 52-60). Each interval is then classified according to one of the audio events based on the classification of the segments within the interval. The presence of meta patterns in the audio stream are identified where a meta pattern is a predefined sequence of variously classified intervals (Petkovic, col. 7, line 61 to col. 8, line 21). For example, thirty seconds of short, alternating sequences of intervals designated as “music”, “speech”, and “speech on music” in any order might match a predefined “commercial” meta pattern. Other meta pattern genre include “education/training”, “cartoons”, “news”, and “broadcast news break”.

Selected portions of the audio stream are then processed using a speech recognition engine 29. The portions selected for conversion are selected based on particular types of identified meta patterns. For example, a portion of the audio stream designated with the meta pattern “news”, is sent to the speech recognition engine 29 for processing (Petkovic, col. 7, lines 27-31). The selected portions of the audio stream are converted to text, and two weights, a

“confidence level” weight and an “emphasis” weight, are used for all of the words rendered by the speech recognition engine 29 (Petkovic, col. 7, lines 42-46).

Petkovic requires a two-step process for retrieving specific content from within the audio stream. First, the audio stream is segmented and classified according to determined meta patterns. Second, only selected segments of the audio stream are processed by a speech recognition system to determine words of a selected length, that is a selected number of characters, and to determine words that exceed a confidence level weight threshold. The segments of the audio stream are selected based on their meta patterns. Therefore, the speech recognition process is not performed until after the audio stream is classified according to the meta patterns.

Within the Office Action, it is stated that Petkovic teaches that the audio stream is indexed based on “interesting events”. The Applicants agree that Petkovic teaches indexing and classifying an audio stream based on “interesting events”, where according to column 4, lines 46-49 of Petkovic, “interesting events” in speech include emphasis in speech, hesitation in speech, and concluding ideas in speech. **These “interesting events” are defined in Petkovic as a predetermined set of audio events including silence, speech, music, and speech on music** (Petkovic, col. 7, lines 56-57). However, it is also stated within the Office Action that the predetermined audio events anticipate the “predetermined content” as claimed in the present application, specifically the independent Claims 48 and 55. The Applicants respectfully disagree with this conclusion.

Within the present specification, “predetermined content” is clearly defined as “content is selected from the group including phone numbers, e-mail addresses, physical addresses, dates, and times” (Specification, page 9, lines 20-22). Clearly, the predetermined audio events of Petkovic are not the same as the predetermined content as claimed in the present invention. As such, Petkovic does not teach searching the audio stream for a “predetermined content”.

It is further stated within the Office Action that Petkovic teaches word spotting, and as such, Petkovic searches the audio stream for a predetermined content. The Applicants respectfully disagree with this conclusion. Petkovic more specifically teaches indexing features that are used to improve the precision and recall of an information retrieval system used after indexing for subsequent word spotting (Petkovic, Abstract, and col. 7, lines 32-37, and col. 3, lines 15-16). In other words, **subsequent** applications can be used, **after** the audio stream is

indexed and classified according to the meta patterns described above. This indicates that searching for a predetermined content is performed on a previously indexed and classified audio stream. Further, as described in detail above, searching for a predetermined content is performed on a selected portion of the audio stream, where the portion can only be selected according to the meta pattern classifications, thereby necessitating that the audio stream is first classified and then searched for predetermined content.

It is also stated within the Office Action that Petkovic teaches "the invention analyzes the content of audio streams to identify content specific speech", and as such, Petkovic searches the audio stream for predetermined content. However, this cited passage of Petkovic, column 3, line 17, does not provide the necessary full context. The entire cited passage of Petkovic, column 3, lines 16-19, teaches:

"To do this, the invention analyzes the content of the audio streams to identify content specific, application specific, genre specific **clear speech boundaries** with associated confidence levels." (emphasis added)

These speech boundaries are the aforementioned segments and intervals, which are classified according to determined meta patterns. As such, Petkovic again teaches that the audio stream is indexed and classified according to predetermined audio events, not that the audio stream is searched for a "predetermined content", as claimed in the present invention.

Amended independent Claim 48 is directed to an apparatus for marking and accessing bookmarks within a voice message. The apparatus includes a storage media to store the voice message, a processing unit to automatically search the voice message for a predetermined content and automatically bookmark located predetermined content within the voice message wherein the predetermined content is selected from the group consisting of telephone numbers, e-mail addresses, physical addresses, dates, and times, and a user interface to access the voice message at the bookmark. As discussed above, Petkovic teaches searching an audio stream for predetermined audio events. Petkovic does not teach automatically searching the voice message for a predetermined content. For at least these reasons, the independent Claim 48 is allowable over Petkovic.

Claims 49-54 are dependent on independent Claim 48. As stated above, Claim 48 is in a condition for allowance. Accordingly, Claims 49-54 are also in a condition for allowance.

Amended independent Claim 55 is directed to a method of bookmarking a voice message. The method includes automatically searching the voice message for a predetermined content, wherein the predetermined content is selected from the group consisting of telephone numbers, e-mail addresses, physical addresses, dates, and times, locating the predetermined content, and automatically bookmarking the predetermined content at a first bookmark location with a first bookmark. As discussed above, Petkovic teaches searching an audio stream for predetermined audio events. Petkovic does not teach automatically searching the voice message for a predetermined content. For at least these reasons, the independent Claim 55 is allowable over Petkovic.

Claims 56-63 are dependent on independent Claim 55. As stated above, Claim 55 is in a condition for allowance. Accordingly, Claims 56-63 are also in a condition for allowance.

For the reasons given above, Applicants respectfully submit that the claims are in a condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, the Examiner is encouraged to call the undersigned at (408) 530-9700 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,
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